USAID/TCCU

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T E R M I N A L R E P O R T

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TERMINAL REPORT

Introduction:

The acceptance of a tour here in Afghanistan required considerable deliberation and thought. The total impact of such a tour away from family and friends upon various members of the family had to be carefully thought through. If one only looked at the beneficial financial aspects of such a tour, completely disregarding the psychological aspects of routine daily security within a warm friendly community, then making a monetary decision was not a problem.

In my specific case it was not a monetary decision but rather a humanitarian decision directly related to international social contributions. All too often Americans are accused of lacking sufficient benevolent attitudes towards their international neighbors unless it is to their financial advantage. It is true I was concerned with the salary and other accommodations provided by such a tour. I demanded and received somewhere near the accommodations and salary my family had become accustomed to in the United States. It however should not be any surprise to anyone reading this report that no country can duplicate the facilities of the United States except the United States. It should also be obvious to USAID and its administrative delegation that contract as well as direct hire personnel are not accustomed to the housing and social adjustments they are required to make upon taking up residence in Afghanistan.

With all due respect to the maintenance department, housing department, and other USAID supporting agencies, they cannot perform here in Afghanistan with available facilities as they could in the United States or some other advanced country. Employees complain, not so much because they feel their complaints will alter the total effect of the logistical supporting agencies

but because giving vent to their emotions has some sort of therapeutic satisfaction which enable them to continue to cope with the inadequacies of their tour.

To say that incompetency is the rule rather than the exception would misconstrue the facts. For all intensive purposes the logistical support received from various factors of USAID indicate not only competency but the utilization of ingenuity. If one was to be honest and realistic with himself, then he would honestly conclude that he could not perform more effectively under the same circumstances.

First Impressions:

In fairness to those reading this report I must admit I tabulated written or mental notes from the very first day of my arrival. Some of my original impressions have since changed, however, for those employees to follow I shall report the sequence of events as they appeared.

First it became quite clear upon my arrival that I was nothing more than another employee flown half way around the world to do a job. In other words the typical cold American courtesy and curiosity was the exception not the rule. For those not in higher administrative positions, they came to see you to find out for themselves what you were and what you looked like. For those who commanded your respect, they waited until you kept the predetermined appointment they had agreed upon with your immediate supervisors. With all due respect to these pseudo-protocol sessions, it seems to me that all of us are here for a specific purpose which is to do a specific job and to represent the American Government to the best of our abilities. In doing our jobs the interests of our government should be foremost in activities.

Perhaps I formulate some wrong impressions but I felt that many of whom I met had established or were establishing private social empires for themselves. I witnessed several individuals attempting to impress certain officials rather than doing their jobs. Why and for what eventual purposes were beyond my imagination.

Then there were those who gave the pretense of doing a job while their real purposes were simply to experience a well paid two-year vacation. They feigned working and being concerned with the total cultural improvement of Afghanistan; this was more because it was the expected thing to do rather than their true feelings.

A case in point. When an individual spends a considerable amount of time here one would think that Afghans with whom he had worked are thoroughly conversant with what he has done and are aware of his accomplishments. Unfortunately, many Afghan officials are not aware of what certain individuals had done during their tours; this can be also said of USAID to some extent because the American never thought it necessary to confer with responsible officials. When Afghan officials ask if so-and-so is gone, you begin to wonder, but when they ask what he did while here, you become somewhat alarmed.

These impressions, accumulated during the first six months of my tour, caused several frustrating moments. Having come from a very competitive society where efficiency was the measure of an individual, I began to wonder about the standard of measurement here.

USAID in Afghanistan:

I have never fully understood the complete function of USAID/Education here in Afghanistan. For the first 6-9 months of my tour I completely forgot

about their existence. This is partly due to my involvement in establishing a definite program for myself with some attainable goals and objectives, also, because no one from USAID bothered to question me about my activities. I assumed, therefore, USAID/Education was keeping abreast of my activities via the T.C.C.U. Chief of Party and the Associate Chief. Whatever the case, I was not confronted by an AID/Education official until the 9th month of my tour. It was then that I came to realize and appreciate USAID/Education's concern for what I was attempting to do. I can truthfully say those brief discussion periods were beneficial since they afforded me the opportunity to exchange ideas and establish a personal relationship with USAID/Education, as far as my specific activities were, for the first time.

Institute of Education:

Somewhat like USAID/Education I did not become clear as to its program and function until late in my tour. I am still not certain of its authority relative to the innovation of new educational techniques and procedures in the project schools. Although working for the Institute of Education, along with assigned Afghan counterparts, I was never informed of any specific duties which I was expected to carry out. As an American specialist I was never informed of any authority or responsibilities which went along with my position.

The Institute of Education provided logistical support regarding necessary materials and equipment requested. Administratively the Institute's support cannot be questioned, it was either yes or no! If yes, then what ever it was you were attempting to do you either obtained some assistance or were advised. If the answer was no; that was that!

Ministry of Education:

The real blind-spot! I did not find out upon my arrival if there existed a cooperative relationship between the Institute of Education and the Ministry of Education and I still don't know. I've met with several Ministry officials but these were nothing more than cordial visitations. Usually these sessions afforded me an opportunity to relate to them what my current activities were. There has not been any formal planning sessions where definite decisions were reached which effectuated a program or some aspects of a program.

Generally speaking most sessions with the Ministry were approach with crossed fingers. One was always hopeful that whatever was mentioned was not misinterpreted and thus rejected. The Ministry has not utilized this specialist to the full extent of his potentialities; in fact, he has not been tapped for superficial information.

Observations:

Science education in Afghanistan is at the crossroads. It eventually will make a long leap forward, but there are immense difficulties to cross over.

There is a fairly long record of teaching science at the school, and university levels. But the curricula, teaching methods, and evaluation procedures have not kept pace with the rapid advance in the sciences. One of the aims of modern education should be to help men adjust to change.

We live in a world of accelerated change produced, to a large extent, by science and its applications in technology. In such a world all men are

affected by and should have an understanding of the impact of science on human affairs. A grounding in science, in its principles, and its characteristic approaches to natural phenomena, can help men to adjust to these changes of modern life. Clearly, education in science must be extended beyond that small group entering careers in science and technology to include the entire population of each country.

An obvious condition of science education prevails in Afghanistan. They are intensely aware that their development rests heavily upon their ability to train large numbers of their people to serve as technicians, technologists, and scientists and to spread an understanding of science widely among all its people to form a base for a modern informed society. The chief instruments for accomplishing these tasks--schools, technical institutes, and the university--are seriously weakened by a shortage of trained science teachers, by a scarcity of modern textbooks, and by inadequate school laboratories and apparatus. Also, the struggle against rigid examination systems and outdated curricula in their efforts to innovate modern scientific concepts makes for what seems to be an insurmountable task.

We are in the midst of a revolution in biological education as we see the changes transforming the subject from a rhetoric of conclusions centered upon morphology and systematics to a laboratory-oriented experimental science dealing with a wide variety of biological experiences. As the most personal of sciences taken by lycee and university students in their formal education, biology should be of the highest quality as both an example of science and for its basic worth as a contributor to the life of Afghanistan's citizenry.

Pursuing an activist role, it is apparent that Kabul University and the Ministry of Education could make the greatest impact by providing teachers

with books, laboratory manuals, teacher's guides, films, and similar instructional materials designed to emphasize biology as a modern experimental science which would be useable within the classrooms.

In this context it becomes apparent that books are needed which present biology in a useful fashion and cover it in a fashion and manner appropriate for both the biological and educational demands of Afghanistan. Some consideration must be given to the accuracy of the current textual materials as it relates to the flora, fauna, and geological history of Afghanistan. Teachers and students should first be aware of their own biological community before extending into other countries. Thus, the production of textual materials by a specially selected group should "dare to differ with the current curriculum." They should attempt to produce materials which depict the true biological communities of Afghanistan, and at the same time flavor the materials with newly developed biological concepts. If properly done, much of the course content may be unfamiliar to the trained experienced teacher and gaps in their biological background will not only be obvious to them but to Kabul University and the Ministry of Education as well.

Kabul University and the Ministry of Education should jointly consider the problems created by this modern biology curriculum. The central activity of resolving problems surrounding curricular changes should rest with them--towards motivating the establishment of a special committee. This committee should determine measures necessary for informing experienced teachers and for the training of new teachers in methods of teaching the new curricular materials. Organization and cooperation between the two institutions is essential, not only for the promulgation of factual information regarding

the biological curriculum changes, but also the changes necessary to prepare teachers better for the problem of educating young people according to the modern educational trends.

There is little doubt that in the years to come we will look upon the 1960's as a unique period in the history of Afghanistan's biological science education. So many things that so many people have said for so many years will suddenly become important. National anxieties about the quality and relevance of biology teaching and recruitment to the scientific professions will be heightened by social and economic needs. Science has become synonymous with survival; consequently, nations now look to science education for an answer to their problems.

Here in Afghanistan the first moves must come from the science teachers themselves. At present there exists a small group of science teachers who are taking a critical look at the subject matter they are teaching. Ultimately more and more teachers will become discontented with current textual materials, laboratory facilities, teacher preparation courses, science institutes, etc. Their professional attitudes will make them desirous of wanting to motivate students to understand science rather than to merely memorize isolated facts for examination purposes. In order to do so, the teachers will demand more information in textual materials, better laboratory facilities and equipment, and source materials to refer to. Once the wheels of concern begin to rotate, Afghan officials concerned with the formulation of educational policies along with supporting foreign agencies, must come to grips with the obvious, making the second move towards revamping the over-all science education structure. Priorities will have to be assigned to the various disciplines

according to their order of importance in the school curriculum and according to the importance of one preceding another, depending upon student competence at certain grade levels.[1]

With the cooperation of USAID, math-science institutes, teacher workshops, development of some textual materials, etc. have already taken place. These are small but important innovations. Some critics ignorant of modern scientific trends will argue that "Afghanistan is not ready for large diversified changes"; they are right, to some degree. Granted, rapid and sudden changes would not only confuse the present science education structure, but such changes might even set it back. Hapazardness in developing science education here is a dangerous risk. It is not necessary for Afghanistan to make the same mistakes, however, which developed countries experienced during their developmental stages. In several countries through trial and error they have finally arrived at an educational scheme producing favorable results with satisfactory curricular materials. Here in Afghanistan as in other countries on the verge of rising, they should profit from the mistakes made by the more advanced countries. Some serious thought should be given to the actual needs of the country and its young people seeking science education, and not what some individuals might think the needs to be.

Functional Activities:

During the course of my tour many problems arose with teachers and students concerning the use of official textual materials. Consequently, a textbook evaluation was initiated in an attempt to discover the science literacy levels of 11th and 12 grade students. The present translated 11th

[1] Lockett, A., Diagnostic Report, Lycee Project, August, 1967.

and 12th grade textual materials (Biological Sciences Curriculum Study) were written for students in the United States. They refer primarily to the temperature, fauna and flora of the Western Hemisphere. They were designed for the American school system (with implications about the prior education of the youngsters, the kinds of laboratory equipment available, the kinds of schedules followed, the character of books available in the library, and the existence of centralized biological supply houses). They use examples and phrases peculiarly American. The real and psychological barriers these materials present both to the teacher and student could be completely eradicated if the textual materials were thoughtfully modified for Afghanistan conditions.

To teach nothing but principles and methods can result in worthless abstraction. A student must acquire some body of knowledge for his studies to have meaning, and it is also important that the logic of this knowledge and links between its components are fully appreciated. The aim, then, of this evaluation was merely to accumulate facts--facts which should form the framework for the future biology curriculum. This new curriculum should be one designed basically for the future citizen rather than the future specialist.

It takes years of continuous work and investigation for an individual to become thoroughly knowledgeable of any given educational community, provided of course, the person is open-minded. Experiences in other situations most certainly are assets if utilized properly. This investigator, though here for only 18 months, has had considerable experience in several other situations, has approached the problems of biological education in Afghanistan's Lycees with an open mind, consequently has been able to pinpoint several facts.

The following are a few:

1. Biology teachers are poorly prepared. They not only lack sufficient academic biology training but also science training in general.
2. In spite of the recently translated 11th and 12th grade biology curricular materials, teachers continue to lecture from antiquated notes taken when they were students themselves, since the new materials are completely foreign to them and because they do not have adequate reference materials to refer to prior to attempting a specific concept with their students. Invariably, they give the excuse that the materials "are too difficult."
3. Students do not read assignments if given by their teachers, their excuse being "the contents of the biology text are too extensive to commit to memory; it's better if the teacher tells us what we should know for examination purposes."
4. Class activities are generally disorganized since teachers are not accustomed to making weekly or monthly lesson plans. Also,

the scope of the evaluation was restricted to approximately 1500 11th and 12th grade students. Two hundred students were randomly selected from each of the project schools to determine levels of achievement. Several evaluation instruments were used by the investigator:

1. Pre-test to determine students' level of scientific literacy.
2. Numerical ability test to determine students' abilities to transfer mathematical knowledge to a scientific situation.
3. Verbal reasoning test to determine students relative understanding of word meanings and word comparisons.

4. Comprehensive test to determine students' understanding of content material.

Item Analysis:

Item analyses were made on student responses of evaluation instruments. Records are maintained on each of the 11th and 12th grade students in project schools. These records contain tabulated information on the individual students' performances. These records resulting from the item analyses should not be misinterpreted. They do not and could not represent valid undisputable results since there exist no previous records of their having been tested for diagnostic purposes. Consequently, these tests should not be thought of as an attempt to measure the students' innate intellectual capacities, but rather to merely establish a base-line for future operations.

Teacher and Student Feedback:

During the course of the evaluation proceedings, comments concerning the teachability, accuracy, and students' comprehension of textual materials were solicited. Following are a few selected excerpts:

12th Grade Teacher Comments:

1. "Transition from the plant kingdom was not very smooth. Students had difficulties with several expressions they were expected to know from the 11th grade textbook which they did not study."

2. "Repetition of protozoan phyla was very poor."

3. "Another animal must be found to replace the extensive coverage of the Hydra since the Hydra is scarce or non-existant in Afghanistan."

4. "Explanation and purposes of DNA and RNA were not clear."

11th Grade Teacher Comments:

1. "Spontaneous generation is not presented clear enough for student comprehension of intended purposes."

2. "The definition of life, as given, is too complicated plus it created several heated discussions."

3. "Explanation of energy (ATP) is not clear. Students had difficulty understanding its production and utilization in the cell."

4. "The classification of plants is very traditional and difficult. Students are required to memorize several scientific names and groupings without understanding. Why?"

Student Comments:

Difficult Topics:

11th Grade Biology

1. "Cell structure and function"

2. "Redi's experiment, too long and complicated."

3. "DNA (deoxyribonuclei acid) and RNA (ribonuclei acid)."

4. "Food and the energy chain."

5. "Pathogenic characteristics of bacteria and viruses."

12th Grade Biology

1. "Homeostatic regulation"

2. "Difference between diffusion and osmosis."

3. "Oxygen, carbon, and nitrogen cycles."

4. "Functions of various neurons."

5. "Contrast between different digestive processes in animals."

RECOMMENDATIONS:

1. There now exists in Afghanistan a small reservoir of biology teachers untrained in the new methods of teaching biology, as required by the newly adopted 11th and 12th grade texts. For the most part, these teachers may be considered enthusiastically interested in gaining new knowledge for classroom use. However, they do not have the tools to do so. The minimum tool would be a revision and adaptation of the present curricular material.
2. The establishment of an Afghan Writing Team, to prepare an adaptation needs immediate attention and planning. A group of trained writers is non-existent.
3. The writing team should consist of at least four Afghan biologists, two at the University level, and two Lycee biology teachers. The team should travel to and work with the Biological Sciences Curriculum Study Group at the University of Colorado. All members of the team should be sympathetic to the new approach, cooperatively inclined towards each other, and knowledgeable about modern biology, the BSCS Program, and Afghanistan's Lycee education.
4. The adaptation should be based upon the current evaluation efforts and the forthcoming 1968 editions of the BSCS materials.
5. While much of the professional writing and art work could be supplied by foreign writers, special provisions should be made for illustrations representative of Afghanistan conditions.

6. The adaptation should be prepared in a limited edition of about 5,000 copies, and considered to be an experimental edition. Copies should be distributed to each biology teacher trained in the Math-Science Institutes, and Kabul University Science Professors, with specific requests that they study the experimental copies and send their reactions to the Adaptation Team. A number of these teachers in selected provinces of Afghanistan should be recruited into special service by asking them to use the experimental books with their own classes. The reactions of these teachers should be especially sought and members of the adaptation team should visit those classes a number of times during the year to observe the progress of the students. Copies of the experimental edition copies should also be sent to a large number of the nation's leading scientists and teachers requesting them to send their reactions to the committee.
7. The Adaptation Committee should reassemble after it has had a chance to study the information obtained from the exploitation of the experimental edition, and rewrite the book based on the experience gained.
8. This final edition, containing both text and laboratory exercises as well as instructions for the teachers (Teacher's Guides), should be published and made generally available throughout Afghanistan for use by the Lycee biology students.

SPECIFIC COMMENTS

In discussing the incorrectness and obvious discontinuity within the 11th and 12th grade texts (Biology Evaluation, Lockett: April 22) it must be remembered that the purpose was to point out their shortcomings. It is most unfortunate they contain so many areas which lead the students and teachers down the primrose path only to push them into a bottomless pit and thus they remain suspended until the next chapter begins. Consequently, Afghan students and teachers, who do not know better, are susceptive to erroneous information without having the opportunity to compare the aforementioned information with a reliable reference.

Much fault lies with the Afghans who selected, translated, or proofread the topics which were included without utilizing their intellectual abilities to determine a feasible approach. Certainly many of them will say that they had no choice but to follow the mandate as set forth by the specialist or specialists responsible for establishing the format and topical sequences which were incorporated in what eventually became the approved 11th and 12th grade biology textbooks. These Afghans either failed to establish themselves as responsible counterparts with years of experience in the educational system, or they intentionally accepted advice and decisions from uninformed foreigners. If so, they are responsible for the unteachability of many of the concepts within the texts. The foreigners on the other hand apparently did not seek their advice but rather injected their own thoughts and ideas into the formulation of these materials without contemplating the adverse results they might cause.

Regardless of who may have been at fault singularly or jointly the question now is what adjustments are necessary. The students and teachers

of Afghanistan not only deserve better textual materials which truly depicts their biological communities and problems as they observed them, they expect to be informed via textual materials how to cope with these daily problems. Biology is the most personal subject offered in a school, no other course permits the student to project himself into the general scheme of things. Biological concepts which are identifiable with real day to day ecological situations are far more meaningful than those completely unrelated to economic problems which may confront the average biology student.

The construction of these textual materials (11th and 12th grade biology) are now history. The mistakes within as well as the seemly lack of formal organization are also historical. The one important contribution derivable from these materials is a better insight for future textual endeavors of this nature. It should be clearly obvious that something must be done; what will happen to remedy the existing problem is beyond my subjectiveness.

Decisions are necessary from appropriate Afghan authorities signifying their awareness of the problem plus specific plans for the resolving of this academic calamity. If ministerial finances (Education) are not available to carry out their purposed plans then USAID or some other foreign assistance agency must be prompted to lend a helping hand. It is unfortunate that circumstances has caused USAID/Education/Afghanistan to reduce its support at a time when significant achievements could be realized. This perplexing situation may cause some Afghan officials to momentarily shrug their responsibilities because of uncertainty of what the future may hold for them as well as the educational structure of their country.

CONCLUSIONS:

It is clearly visible that Afghanistan is in the midst of an educational revolution. So many things are being said and done by numerous individuals both foreign and domestic. Countless numbers of Afghans are returning from and departing for educational training in foreign countries. The potential intellectual capacities within each department at the University and the various ministries increases with the arrival of each Afghan with an advanced degree. Unfortunately, many of these returning potential leaders lie dormant within some ministry rather than becoming an active promoter of new trends and techniques.

It could be said that the inactive non-productive tendencies of returning Afghans is an Afghan problem and notnecessarily the concern of the foreign agency which sent them for the advanced training. Nothing could be further from the truth. Returning Afghans need advice and cooperation from foreign specialists more than the non-returning or indigenous Afghan counterparts. The returning trained Afghan is torn between cultures, between educational organizations, between systematic administrative procedures, and between his re-identification with his society. He has become a pseudo-foreigner during his absence from his country. He will either do nothing because of the system or he will become frustrated and eventually retrogress back into his pre-departure attitude; justifiably he cannot withstand the disassociation from his society or the foreign society from which he came. Consequently, since a decision is necessary, he will make the necessary psychological adjustments and revert back to his original outlook, in other words "business as usual." The trip and experiences were nice but he is home now!

The following sentence or so is documented from experiences of this specialist. "A returning Afghan was subjected to and was prone towards the relinquishment of all his academic gains because he could not identify with his fellow Afghans. Until given specific authority and responsibilities he was completely frustrated; now he is quite functional plus he has the self-confidence necessary to help his people."

However, the prevailing administrative procedures between the Ministry of Education and the Institute of Education are seriously lacking in cooperative coordination of efforts. Many well conceived proposals, originated in the Institute of Education, are rejected by the Ministry of Education under the customary guise of setting it aside for more discussion. This obvious rejection of proposals by well-trained Afghans tends to cause frustrations and mounting uncertainty regarding the future of education here in Afghanistan. It is not enough for foreign specialists to recognize the contributions these trained Afghans can make towards the advancement of education, the Afghan administrators must give them the recognition their intellect and experiences demand.

Returning now to the specifics of this paper. The groundwork has been laid by the Columbia University Biology Project for the production of meaningful textual materials. Afghans under the auspices of USAID have received graduate or advanced training. There is still a need for foreign consultation but, by and large, the Afghans, knowing their educational structure better than anyone else, are now ready to improve their biology textbooks. Granted the Afghans must now make some decisions but let us not push them into making some decisions solely for the purpose of decision making! Let us help them--our purpose for being here--but we should insist upon their total commitment to joint decisions made.